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166.3
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no. 14

FARM CREDIT ADMINISTRATION
Cooperative Division
Washington, D.C.

WESTERN CREAM FOR EASTERN MARKETS

By
Leland Spencer

* * *

In Cooperation with
New York State College of Agriculture

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Research, Service, and Educational Series

INV. '60

Miscellaneous Report No. 14

166.3
M68
no. 14

May 1937

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AMERICAN
CREDIT

WESTERN CREAM FOR EASTERN MARKETS

By Leland Spencer, Professor of Marketing,
New York State College of Agriculture 1/

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JUL 1 1937
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Cream from the Central Western States has been a matter of concern to the eastern milk-bargaining associations for some time. In some of the eastern markets this cream constitutes an important part of the total supply and is wholly uncontrolled by the producers' associations whose function has been to bargain for prices on the supplies of milk and cream produced locally. During 1936 the Cooperative Division, Farm Credit Administration, and the Department of Agricultural Economics and Farm Management, New York State College of Agriculture, made a study of the supplies of cream actually shipped or available to be shipped to markets in the Northeast. It has been the purpose of this section of the study to assemble facts on the western cream situation which should be useful to milk producers' associations and others, in their efforts to bring about a better coordination between western and local supplies, and other adjustments which will tend to stabilize both supplies and prices of cream and milk in the eastern markets. This preliminary report represents a summary of the results of that study.

1/ Acknowledgment is made of the helpful suggestions of Dr. T. G. Stitts, Farm Credit Administration, and the generous cooperation of the many dairy organizations - both cooperative and proprietary, and railroad companies, who made available the data on which this analysis is based.

This report covers one phase of a more comprehensive study which is being made of the surplus milk problem in the northeastern milksheds. The general scope of this study has been outlined in an earlier report: The Surplus Problem in the Northeastern Milksheds. F.C.A. Miscellaneous Report No. 9, 48 pp., August 1936 (Mimeographed).

IMPORTANCE OF WESTERN CREAM

Cream shipped from plants in the Central West has been an important factor on the larger eastern markets since about 1924. During the year ending April 1925, records obtained from two railroad companies showed shipments of cream from several States west of New York and Pennsylvania to the New York market amounting to 172,000 forty-quart cans.^{2/} These shipments were equivalent to 14 percent of all cream received at the New York market during that period. In the months from November to February, inclusive, western cream constituted 29 percent to 39 percent of the total cream receipts. Later shipments of western cream to the New York market were curtailed drastically as the result of regulations enforced by the New York City Department of Health.

Reports of the Market News Service, United States Bureau of Agricultural Economics, showed 441,000 cans of western cream received on the three principal eastern markets in 1931 (table 1). In 1936, receipts of western cream on these markets amounted to 334,000 cans. In both years, western cream constituted about 15 percent of the total receipts of cream at these markets.

Table 1.-Receipts of western cream at Boston, New York and Philadelphia, 1931 and 1936

Market	Quantity shipped		Percentage of total cream receipts at market	
	1931		1936	
	1,000 40-qt. cans	1,000 40-qt. cans	Percent	Percent
Boston	164	194	27.8	33.8
New York	49	48	2.6	3.2
Philadelphia	228	92	68.3	44.8
Total	441	334	15.7	15.2

Reports of shipments of western cream handled by all interested railroad lines showed the total volume of such traffic to be 618,000 cans in the 12 months ending June 1933; and 694,000 cans during the 12 months ending August 1936 (table 2). The latter volume represents a quantity of milk greater than the total volume of milk sold in one year from all the farms in Maryland and Delaware, or Maine and New Hampshire.

^{2/} Cornell University. Farm Economics No. 30. December 1935. See page 368.

Table 2.-Shipments of western cream to eastern markets, for
12-month periods ending June 1933
and August 1936

Market	Shipments during 12 months -		
	Ending in	Ending in	
	June 1933	August 1936	
	1,000 40-qt. cans	1,000 40-qt. cans	
Boston metropolitan area	210	176	
Upper New England	10	24	
Connecticut	23	46	
Rhode Island	22	2	
New York metropolitan area	102	90	
Up-State New York	52	87	
Philadelphia metropolitan area	151	138	
Other New Jersey	4	6	
Other Pennsylvania	20	16	
Maryland	6	36	
Delaware	5	16	
Washington metropolitan area	10	37	
Other Virginia	3	20	
Total	618	694	

SANITARY REQUIREMENTS AND THEIR EFFECT ON MARKET SUPPLIES

Boston and Philadelphia are the most important eastern markets for western cream. Receipts of such cream at the New York market are surprisingly low in relation to the total volume from all sources. The main reason for this is the fact that the New York City Department of Health has not extended its country inspection beyond the Pennsylvania-Ohio boundary. In fact, the policies and requirements of municipal and State health authorities have much to do with the quality, quantity, and prices of western cream received on the several markets or groups of markets in the East. In most markets the requirements have been raised considerably in the last few years. Aside from protecting the public health, the more strict regulations pertaining to western cream have probably had the effect of curtailing available cream supplies and thereby raising prices. Regulations affecting the supply of cream for the more important eastern markets may be summarized as follows:

Boston has always been an open market, except for a few months in 1931 when outside supplies were temporarily excluded.

Connecticut: State officials inspect twice a year plants and farms, to which special permits are issued. The expense for these inspections is charged to the shipper.

Rhode Island: Admits cream on the basis of inspection certificate by health officials in the States of origin.

New York: The New York City Department of Health makes no inspections west of New York State and Pennsylvania. Up-State markets are permitted to receive western cream under certain conditions; the importing dealers are licensed, and it is required that a special red tag be attached to each can of such cream.

New Jersey: The State and other municipalities in the State normally accept the results of inspection by the Newark Health Department, whose requirements are more strict than those of any other market except Lower Marion Township, Pennsylvania. Annual inspections are made of all plants and representative dairies delivering to them. The expenses are charged to the shippers.

Pennsylvania: Since 1929, supervision of all out-of-State supplies of milk and cream has been exercised by the Pennsylvania State Department of Health. Regulations by that department have cut down considerably the receipts of outside cream in Pennsylvania markets, particularly during the last 2 or 3 years.

The City of Philadelphia makes no country inspection of either local or outside supplies, but a suburban district, Lower Marion Township, has set up very strict requirements for all plants and dairies contributing to its supply of milk, cream, and ice cream. Since the larger milk dealers and ice cream manufacturers distribute their products in this township, as well as in sections of New Jersey, it is practically necessary that their cream supplies be approved for both Lower Marion Township and Newark, as well as by the State of Pennsylvania. Lower Marion Township charges the shippers for inspections made more than 60 miles away, but no such charges are made by the State.

Delaware: Wilmington, the principal market, grants permits to outside shippers on the basis of inspection certificates from officials of the State of origin.

Maryland: Until last year the city of Baltimore issued permits for emergency cream supplies to a few plants only, on certification of inspection by officials of the State of origin. This policy was upset by a recent court decision.

Washington, D. C. admits outside cream for manufacture only. Certification by officials of the State of origin is accepted in lieu of inspection by the city.

Virginia: Alexandria, Norfolk, and Richmond, the principal markets in that State, require no inspection of either plants or dairies.

Florida: State officials make annual inspections of both plants and farms. No distinction is made as to whether the cream is to be used as table cream or for manufacture into ice cream. The expense of inspections is charged to the shippers. Because of highly seasonal demand, markets in that State have not been very satisfactory to western shippers.

Recently some plants have given up eastern permits because of conflict between requirements there and those for Chicago; for example, Newark requires a certain amount of open floor space in the milk house. Chicago has required producers to put in steam sterilizers and tanks, causing the open floor space to be reduced below the minimum required by Newark.

At first the western cream shippers were outraged by the new requirements, and many of them decided to give up their cream business in the East rather than attempt to comply with what they considered fanciful and impractical regulations. Later, a marked rise in cream prices, particularly in those markets where more strict requirements had been put in force, caused a change of attitude among the shippers.

In the summer of 1936, many of the western cream plants were embarked on extensive improvement programs, preparing both plants and farms to meet inspection, particularly for the important cream markets in Lower Marion Township, Pa., and Newark, N. J. Large sums were being spent for remodeling of plants. A number of the dealers were financing the construction of milk houses and remodeling of stables, the cost to be refunded by deductions from milk checks, and these deductions to be offset in part, or even wholly, by premiums for inspected milk. Several of the plants employed men to supervise improvements on the farms, supplied materials at wholesale prices, and in some instances had crews of men to do the work at cost. One of the largest shippers has built an entirely new plant designed to meet all eastern requirements, and has succeeded in getting dairies of a large number of its patrons ready for inspection. The milk from these patrons now is received and handled in this auxiliary plant. At several other plants trucks with inclosed insulated bodies are being used to collect milk from the farms.

At present there is a great range in sanitary standards adhered to at the various plants. In some cases these standards remain at the usual level for dairy manufacturing plants, and certain markets remain open to them without inspection. On the other hand, a few plants, and the farms which furnish their supplies, compare favorably with grade A plants and dairies in the East. In general, the conditions which make for cream of high quality are being established rapidly in the western territory.

SEASONAL DISTRIBUTION OF CREAM SHIPMENTS

It will be noted from table 3 that the volume of western cream shipments runs highest in May, June, July, and August. This reflects the seasonal demand of ice cream manufacturers, who are the largest buyers of western cream. The shipments in August 1936 were much below normal because the supply of cream at western plants was cut down drastically by the drought.

Table 3.—Seasonal variation in shipments of western cream to eastern markets 1/

Month	Daily receipts for indicated month as a percentage of the average for the 12 months -	
	1933	Ending August 1936
January	69	90
February	102	90
March	87	117
April	98	101
May	128	124
June	112	100
July	136	139
August	214	137
September	99	30
October	51	44
November	51	127
December	53	99
Average daily receipts for year	100	100

1/ Based on total shipments reported by the railroads.

SOURCES OF WESTERN CREAM

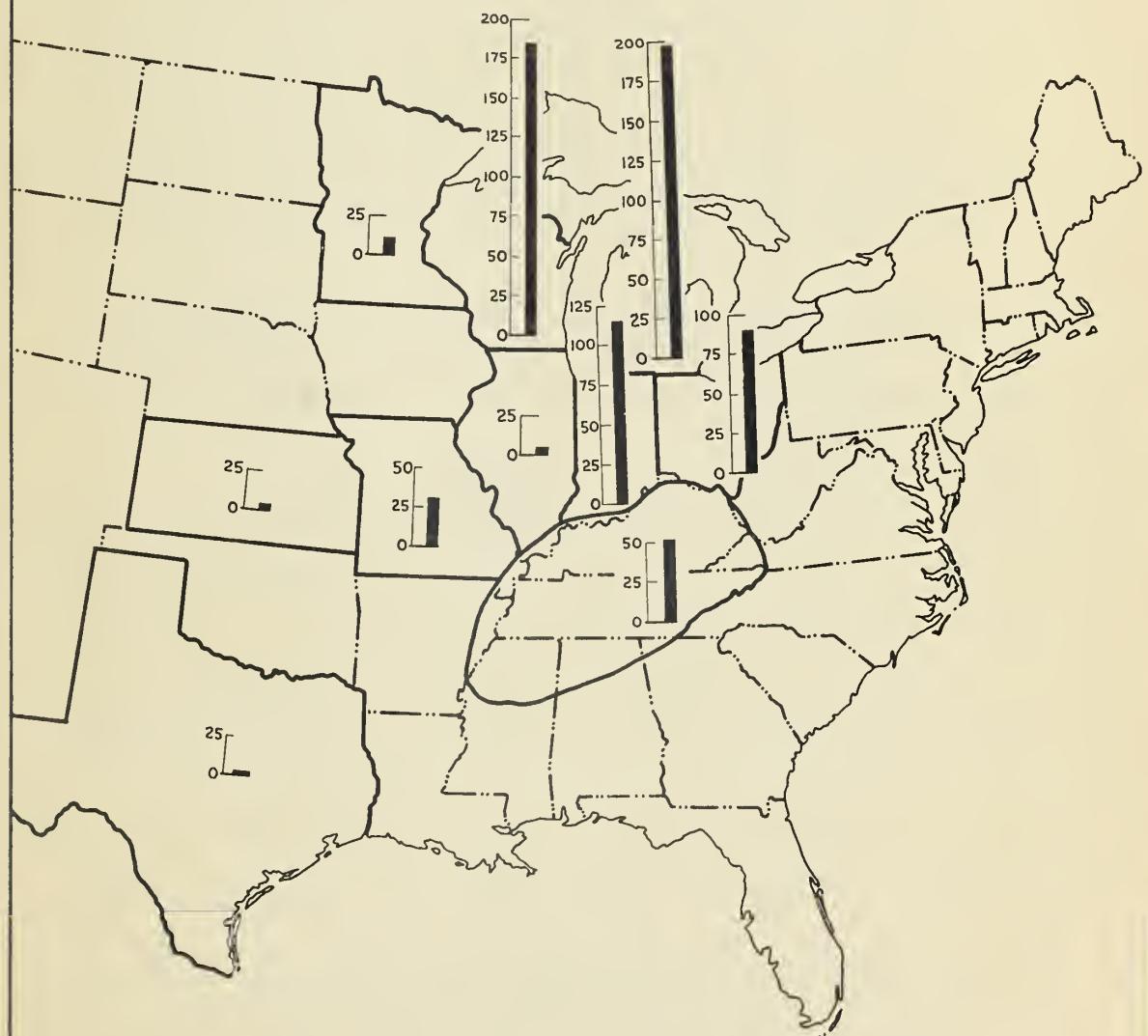
Records of shipments of fresh cream during the 12 months ending with August 1936 show that varying quantities originated at 75 shipping points in 12 States, extending from Ohio and Indiana southwest through Kentucky and Tennessee to Mississippi, Texas, Kansas, and Missouri; and from Michigan west to Minnesota, including Wisconsin and Illinois. Michigan, Wisconsin, and Indiana supplied between 100,000 and 200,000 cans each (fig. 1). During the year mentioned, shipments of fresh cream to eastern markets were reported from 30 stations in Wisconsin and from 13 stations in Michigan.

While the sources of western cream are widespread even today, they are less so than formerly. A similar map for 1929 would have indicated that such States as Minnesota and Texas were shipping relatively more cream at that time than in 1935-36.

CREAM SHIPPED TO EASTERN MARKETS

September 1935 - August 1936

(Thousands of 40-quart cans)



No. 9481

FIGURE 1.- Cream for eastern markets originated in 12 central western dairy states, a high proportion of the total coming from Michigan, Wisconsin, Indiana and Ohio.

RECEIPTS OF MILK AND CREAM AT WESTERN CREAM PLANTS

The survey conducted during the summer of 1936 included about 30 dairy plants in the Central Western States, and detailed records of operations are available for 24 of these.

All of the plants included in the survey received at least the major part of their butterfat in whole milk. Only six plants received any farm-separated cream, and the volume was less than 2 percent of the total receipts of butterfat (table 4). In some cases the farm-separated cream was segregated for manufacture, but in other cases it was mixed with cream separated at the plants and shipped as fresh cream. Seven of the plants received milk and seven received cream transferred from other plants. Six of the 24 plants received transfers of milk from their own substations or affiliated plants. A few plants in the group bought or handled cream for other plants, and several bought skim milk for manufacture. However, 71 percent of the butterfat in November 1935, and 81 percent in June 1936, was received as whole milk direct from farmers.

Table 4.—Sources of butterfat received at 24 dairy plants in the Central West, shipping cream to eastern markets

Source	Number of plants	Percentage of total butterfat receipts	
		November 1935	June 1936
Direct from farmers:			
Milk	24	70.7	81.0
Cream	6	1.6	1.8
From other plants:			
Milk	7	10.9	11.3
Cream	7	10.8	5.5
Frozen cream from storage	2	6.0	.4
Total	--	100.0	100.0

The supply of milk at these plants varied seasonally, depending on the location. At most of the plants the seasonal peak of receipts came in May or June, and the seasonal low point between November and February. In most cases the peak volume was between two and three times the volume at the season of smallest receipts. Some of these plants drew their supplies from rather wide areas. Direct hauls of 30 miles or more were common. In several cases hauling by the plants for less than cost or subsidies paid to hired haulers had the effect of extending the territory and thereby increasing the volume handled by the plants.

Most of the plants shipping cream to the eastern markets handled large volumes. In June 1936, five of the 24 plants included in the survey received, direct from farmers, quantities of butterfat equivalent to more than 200 forty-quart cans of 40 percent cream; 10 plants received total quantities of butterfat, including receipts from other plants, equivalent to more than 200 cans of 40 percent cream (table 5).^{3/} This quantity is equivalent to 2,000 cans or more of whole milk.

Table 5.—Variation in daily receipts at 24 western plants that shipped cream to eastern markets

Volume group (equivalent of 40- quart cans of cream)	Number of plants receiving direct from farmers		Number of plants having indicated receipts from all sources	
	November 1935	June 1936	November 1935	June 1936
Less than 50	9	1	8	1
50-99	10	5	5	4
100 - 149	3	8	7	4
150 - 199	1	5	-	6
200 - 249	1	2	3	4
250 or more	-	3	1	6
Total	24	24	24	24

There was much variation among these western plants with respect to the size of dairies from which their supplies were drawn. In June 1936, five of the plants received milk from dairies whose average volume for the month was less than 1-1/2 cans per farm, while three of the plants obtained their supplies from dairies which averaged more than 4 cans of milk per farm. In November 1935, the dairies delivering to ten of the plants averaged less than 1 can of milk per farm (table 6).

^{3/} 200 cans is a significant quantity, as it is the minimum carload for which carlot rates are granted. Nearly all fresh cream moving long distances is shipped in 200-can lots.

Table 6.—Size of dairies supplying milk to western plants
that ship cream to eastern markets

Quantity of milk delivered daily per farm (40-quart cans)	Number of plants receiving indicated average quantity per farm	
	November 1935	June 1936
Less than 0.5	-	-
0.5 - 0.9	10	-
1.0 - 1.4	6	5
1.5 - 1.9	3	2
2.0 - 2.4	5	4
2.5 - 2.9	1	1
3.0 - 3.4	1	4
3.5 - 3.9	1	5
4.0 - 4.4	-	3
Total	24	24

TYPES OF PLANTS SHIPPING CREAM

Most plants that ship cream to the eastern markets are equipped for flexible operation; that is, they can readily shift between two or more methods of disposal of butterfat, and in some cases also can vary the disposal of skim milk. As a rule, these plants ship cream to the East only when this outlet, together with the disposal of skim milk, yields a higher return than other methods of disposal readily open to them.

The 24 plants may be classified in seven groups according to method of disposal of butterfat, as follows:

	<u>Number of plants</u>
1. Cream only	3 ^{4/}
2. Whole milk and cream	2
3. Evaporated milk, and cream	2 ^{5/}

^{4/} One of these plants is affiliated with a group which has flexible operations.

^{5/} Cream results from the standardization of whole milk to the desired butterfat content before evaporating. One of these plants also makes butter and American cheese.

Number of plants
(Continued)

4. Cream and butter		<u>106/</u>
5. Cream, bulk condensed milk, and ice cream mix		2
6. Whole milk powder and cream		<u>37/</u>
7. Cream cheese and cream		2

Eight of these plants were surplus plants for Chicago, Milwaukee, Akron, or Pittsburgh, and several of them shipped fluid milk at certain times during the year. Another outlet open to a number of these plants was the sale of concentrated whole milk to evaporated milk plants. One condensing company, in Wisconsin, buys large quantities of such milk every season. Still another alternative is frozen cream, which may either be frozen by the shipper or put up for freezing by one of the large manufacturers of ice cream or cream cheese.

Most of the western plants which have been shipping cream to the eastern markets utilize the major part of their butterfat in the form of cream, and most of the skim milk in the form of milk powder (table 7). Among the 24 plants in the survey, 15 shipped cream to eastern markets in November 1935, and 11 utilized this outlet in June 1936. In November 1935, 41 percent of all butterfat handled by the 24 plants was marketed as cream in the East. The comparable figure for June 1936 was 24 percent.

Table 7.—Utilization of butterfat by 24 dairy plants in the Central West shipping cream to eastern markets

Product	Number of plants		Percentage of total butterfat used	
	November 1935	June 1936	November 1935	June 1936
Whole milk	9	6	6.2	0.5
Fresh cream—for eastern sale	15	11	41.4	23.6
Fresh cream—other	17	15	26.1	15.2
Frozen cream	4	11	1.6	18.1
Ice cream mix	4	4	1.9	3.8
Butter	8	11	5.2	22.8
Cheese	7	6	11.8	9.1
Dry milk	4	4	1.8	1.9
Evaporated milk	6	4	4.0	5.0
Total	24	24	100.0	100.0

6/ Some of these plants also make American sheese.

7/ One of these plants also makes butter.

In addition to dry skim milk, several of the plants utilized skim milk and buttermilk in the form of condensed milk, casein, and cottage cheese. One or two plants used skim milk to standardize the whole milk which was to be evaporated (table 8).

Table 8.—Utilization of skim milk solids by 24 dairy plants in the Central West shipping cream to eastern markets

Product	Number of plants		Percentage of total skim milk solids used	
	November 1935	June 1936	November 1935	June 1936
Liquid skim milk	2	3	0.5	2.6
Condensed skim milk	13	10	13.0	8.9
Dry skim milk				
Roller process	11	15	21.9	35.0
Spray process	11	12	53.4	40.5
Casein	1	3	1.2	7.5
Cottage cheese	3	3	7.3	2.8
Evaporated milk	3	2	2.7	2.7
Total	24	24	100.0	100.0

POTENTIAL SHIPMENTS OF CREAM

Few, if any, of these western cream plants have been shipping as much cream to eastern markets as they could ship if prices were more attractive. During the 12-month period covered by the survey, it was estimated by the proprietors that the 24 plants could ship a total of 3,100 cans daily, compared with actual shipments of 1,100 cans (table 9). These figures do not take into account the increased shipments which might result from larger supplies of milk or cream at these plants. Many of the plants now shipping cream could handle additional butterfat and skim milk, and could attract more milk if market conditions permitted them to offer prices comparing more favorably with those returned by small butter and cheese factories or by condenseries. Of course, the potential volume of cream that may become available as more plants prepare to participate in this trade is practically unlimited.

Table 9.--Quantities of cream which could be shipped to eastern markets by 24 western dairy plants and actual shipments, September 1935 to August 1936

Month	Actual	Potential
	daily shipments 40-quart cans	daily shipments 40-quart cans
September	598	2,979
October	705	2,741
November	1,112	2,596
December	1,079	2,632
January	981	2,407
February	1,059	2,496
March	1,345	2,778
April	1,079	3,256
May	1,514	4,148
June	1,176	4,528
July	1,640	4,025
August	1,145	3,119
Average	1,119	3,142

CONTROL OF WESTERN CREAM PLANTS

Eight of the 24 plants included in the survey were operated by the two Nation-wide dairy corporations. Three others were operated by leading milk distributors of Chicago and Philadelphia. The remaining 13 were controlled locally. Six of these were cooperative plants.

METHODS OF SELLING CREAM

Aside from cream shipped to plants controlled by the same companies, cream from 6 plants was sold direct; cream from 17 plants was sold through brokers; and cream from 1 plant was sold through a sales agent.

As a rule, each shipper who used a broker sold all or most of his cream through the same broker continuously. In at least one case, the broker had an interest in the plant.

Contracts do not play a very large part in the sale of western cream. As a rule, sales are made on a daily basis, or perhaps several cars may be sold at once, to be delivered within a week's time. Usually the agreed price is so much per can, although this price frequently is based on the Chicago or the New York butter market with a premium over. The amount of this premium varies, depending upon the quality, location, alternative outlets, importance of keeping the customers, and other factors.

PRICES AND COSTS

Prices paid producers at these western plants vary widely, depending upon the location, quality of product, disposal of butterfat and skim milk, and efficiency of the plant. In November 1935, the net prices to farmers delivering to 24 plants varied from \$1.12 to \$2.03 per 100 pounds. The majority paid between \$1.32 to \$1.68, or from 58 cents to 22 cents under the price for grade B milk at country plants in the New York milkshed (table 10). In June 1936, the prices ranged from \$1.19 to \$1.61, or from 12 cents over to 30 cents under the New York price.

Table 10.—Comparison of prices paid to farmers at western cream plants and at grade B milk plants in New York

Code number of plant	Price per 100 pounds for 3.5 percent milk		Amount over or under New York price 201-210-mile zone ^{1/}	
	November 1935	June 1936	November 1935	June 1936
1	\$1.40	\$1.61	-\$0.50	+\$0.12
2	1.40	1.61	-.50	+.12
3	2.03	1.55	+.13	+.06
4	1.50	1.55	-.40	+.06
5	1.68	1.54	-.22	+.05
6	1.80	1.54	-.10	+.06
7	1.49	1.52	-.41	+.03
8	1.62	1.50	-.28	+.01
9	1.54	1.46	-.36	-.03
10	1.52	1.45	-.38	-.04
11	1.50	1.45	-.40	-.04
12	1.50	1.44	-.40	-.05
13	1.47	1.44	-.43	-.05
14	1.50	1.44	-.40	-.05
15	1.48	1.42	-.42	-.07
16	1.45	1.42	-.45	-.07
17	1.50	1.40	-.40	-.09
18	1.32	1.40	-.58	-.09
19	1.55	1.40	-.35	-.09
20	1.44	1.40	-.46	-.09
21	1.55	1.36	-.35	-.13
22	1.47	1.36	-.43	-.13
23	1.33	1.28	-.57	-.21
24	1.12	1.19	-.78	-.30

^{1/} The plus sign indicates that the price per 100 pounds was more than the New York price; the minus sign that it was under.

Freight rates from western cream plants to the Atlantic seaboard ranged from about \$1 to \$1.85 per 40-quart can in car lots (table 11). These rates are equivalent to from 10 cents to 19 cents per 100 pounds of milk. Cream prices usually are quoted f.o.b. the buyer's station.

Table 11.—Carlot freight rates on fresh cream in 40-quart cans from western plants to eastern markets, December 1936

Point of origin	Freight rate per 40-quart can to indicated destination			
	Boston, Mass.	Newark, N. J.	Philadelphia, Pa.	Washington, D. C.
Michigan:				
Adrian	\$1.115	\$1.05	\$0.97	\$0.94
Homer	1.155	1.065	1.015	-
Ohio:				
Columbus	1.13	.97	.895	.845
Toledo	1.105	1.015	.945	.895
Indiana:				
Bluffton	1.185	1.085	1.015	.97
Shelbyville	1.25	1.115	1.04	.98
Illinois:				
Vandalia	1.375	1.26	1.195	1.155
Wisconsin:				
Fond du Lac	1.685	1.59	1.52	1.475
Cameron	1.875	1.775	1.71	1.665
Minnesota:				
Minneapolis	1.895	1.795	1.73	1.685
Missouri:				
St. Louis	1.425	1.31	1.25	1.195
Springfield	1.75	-	-	-
Kansas:				
Ottawa	1.725	-	-	-
Tennessee:				
Fayetteville	1.68	1.46	1.375	-
Texas:				
Mt. Pleasant	-	1.85	-	-

Brokerage, in most cases where the cream is sold through brokers, with few exceptions, is 25 cents a can and is paid by the shipper.

Only a few shippers reported any losses from bad accounts. On the other hand, can losses were heavy. They will average between 1 and 2 percent or from 2 to 4 cans per carload of cream shipped. The cans get badly mixed up, because most buyers get cream from several shippers, and because some of the cream may be held in cold storage for several days, or even weeks, before the cans are emptied and returned. In nearly all cases the cans are owned by the shipper.

The icing of cars is a large item of expense in the summer season, and is paid by the shipper. The quantity used ranges from 3 to 5 tons per car in summer and will average around 3-1/2 tons for the year. Reports on the cost of ice varied from \$1 to \$5 per ton. The average would be about \$3.50 a ton.

The net cost of making cream at these plants varied widely, even when differences in method of computation were eliminated. When costs of plant operation were properly allocated to cream and to other products, the normal range in cost of handling and processing cream was from about \$1.25 to \$1.50 per can. This amount includes the icing of cars, and can losses, but excludes freight and brokerage. A method of calculating or estimating the net proceeds from milk disposed of as cream and dry skim milk at typical western cream plants is shown in table 12.

Table 12.—Method of calculating net proceeds from shipments of cream and manufacture of dry skim milk at western cream plants^{1/}

		Proceeds per 10,000 pounds of 4 percent milk	Proceeds per 100 pounds of milk
Cream:			
Gross sale value	11.9 cans @ \$14	\$166.60	\$1.666
Freight	@ \$1.50 per can	\$17.85	\$0.178
Brokerage	@ \$0.25 per can	2.98	.030
Processing, ice, etc.	\$1.35 per can	<u>16.06</u>	<u>.161</u>
	Total expense	<u>36.89</u>	<u>.369</u>
	Net proceeds	<u>129.71</u>	<u>1.297</u>
Dry skim milk:			
Gross sale value	780 lbs. @ \$.09	70.20	.702
Freight	@ \$.006 per lb.	4.68	.047
Processing, pack- age, etc.	.030 per lb.	<u>23.40</u>	<u>.234</u>
	Total expense	<u>28.08</u>	<u>.281</u>
	Net proceeds	<u>42.12</u>	<u>.421</u>
	Total net proceeds	<u>\$171.83</u>	<u>\$1.718</u>

^{1/} The costs and yields here shown are typical, but vary considerably in different plants and at different seasons.

CONCLUSIONS

Shipments of western cream to eastern markets had reached considerable proportions by 1925. The volume of western cream increased rapidly until 1933, when larger surpluses in the eastern milksheds, more strict sanitary requirements, and low cream prices compelled many of the western plants to reduce or discontinue shipments. During the last year or two, however, higher cream prices in the East have induced many of the western plants and farms to make the improvements which are required by health officials of the eastern cities or States. Formerly most of the western cream was used in the manufacture of ice cream or cream cheese. As higher sanitary requirements are put into effect, and the quality of western cream is improved, supplies from that source will compete more directly with eastern supplies for the bottled cream trade.

